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A Successful Case of Laparotomy and Supravaginal Amputation of the Uterus for Rupture.[1]

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ON September 8th, at 1 P.M., I was called by Dr. R. H. Hayes to perform Cæsarean section in a desperate case of labor. Not knowing what I would find, I hastily collected a few instruments, and with my associate, Dr. G. A. Kletzsch, accompanied the doctor to a tenement-house a mile distant, in the fourth story of which we found the patient attended by Dr. W. A. Hawes, who had been called to see her in consultation. She was a healthy Irishwoman, twenty-three years of age, with a rapid, feeble pulse, evidently in a state of collapse. The gentlemen in attendance feared that rupture of the uterus had taken place two hours before. Examination of the abdomen revealed two tumors, a larger one filling the right side of the abdomen and extending as high as the ensiform cartilage, and a smaller occupying the left iliac fossa, both being firm and unyielding. It was evident

[1] Read before the Section on Obstetrics, New York Academy of Medicine, October 24, 1889.

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that the former was the body of the uterus, tilted over to the right and in a state of tetanic contraction, and the latter the head of the child. Palpation of the abdomen above the latter gave an ominous gurgling sound, suggestive of free fluid in the peritoneal cavity. I learned that prolonged attempts had been made to extract the child by forceps and version. Introducing my hand into the vagina, I discovered that the anterior lip of the cervix was deeply lacerated antero-posteriorly, while another laceration extended through the vaginal junction on the left side. Passing my finger through the rent, I entered the abdominal cavity.

The child, which was of unusually large size (fifteen pounds), and was dead, presented in the left dorso-anterior position, with the right hand and foot prolapsed, and was firmly impacted; the head seemed to be partly outside of the uterus. Believing that a further attempt at version would only extend the tear, I at once decided that laparotomy offered the only prospect of saving the woman, and proposed this to the husband, who consented. The patient's condition was desperate, and the surroundings were such that any approach to antisepsis seemed to be impossible, but I felt that she ought to have the chance. She had lost a large amount of blood and her pulse was so feeble that hypodermics of brandy and ether were given. Fifteen minutes after my arrival, assisted by the gentlemen mentioned, and by Dr. Huntington, who had been sent for, I made a free incision, eight inches in length, through a very fat abdominal wall and opened the peritoneal cavity, which contained a quantity of fluid blood and clots. A rent was found extending upward from the cervix through the left broad ligament and the lower uterine segment. The head of the child lay in the left iliac fossa outside of the uterus, being grasped by the edges of the tear. I saw at once that this was not a case for suture of the uterus, as arterial hemorrhage was going on from the vessels of the lacerated broad ligament, and the condition of the patient was such that no time was to be lost. The uterus

was turned out of the cavity, the cervix constricted by a piece of rubber tubing cut from a fountain-syringe (I had forgotten my écraseur in my haste), and the child was extracted through the rent. Without waiting to remove the placenta, I secured the tubing with a pair of artery-forceps, excised the uterus with the ovaries and tubes, and proceeded to tie the bleeding vessels. This part of the operation was completed in twelve minutes. The utero-sacral ligament on the right side was also badly lacerated. The vessels having been secured, and the torn peritoneum sewn with a continuous catgut suture, the peritoneal cavity was thoroughly irrigated with hot water, and the stump was trimmed down and secured in the wound with knitting-needles. No drainage-tube was used.

The bladder was carefully inspected, and was apparently uninjured. The cervix had been so badly torn that I expected it to slough out, as subsequently happened. The wound was hastily closed and the patient was placed in bed in fair condition in less than an hour after the operation, the delay having been due to the time spent in suturing the torn peritoneum. She rallied well, but had a pulse of 140 to 150, and no hopes were entertained of her recovery. From the outset she was free from nausea, and was able to take stimulants. On the second day her temperature rose to 102°–103° F., and there was general abdominal tenderness and distention, but, by maintaining free catharsis and using the ice-bag, peritonitis was aborted. The urine was drawn during the first four or five days, after which it was usually passed spontaneously. The stump quickly necrosed; on the fourth day I replaced the tubing by a Koeberlé's *serre-nœud*, and removed the entire mass at the end of a week, packing the cavity with iodoform gauze. The patient's condition at this time was not entirely satisfactory. She took nourishment and stimulants freely, but her pulse remained at 120 and her temperature rose every evening to 101°–102° F. At one time an exhausting diarrhœa threatened her life. She complained of no pain, but I feared suppuration of the

hæmatocele which had formed in the left broad ligament. As there was considerable discharge from the vagina, injections of creolin (1 to 400) were given after the first few days, with iodoform suppositories.

Early in the second week the urine began to escape per vaginam, although the patient could retain it to some extent. A careful examination with the finger and speculum showed that a cervico-vesico-vaginal fistula had been established, and that there was considerable sloughing of the upper portion of the vagina. All the necrosed tissue at the bottom of the abdominal wound was picked away, until nothing remained of the cervix but the portio vaginalis; the wound granulated nicely, but there was a free communication with the vagina through which urine and the douche-water sometimes welled up. After the second week the patient's temperature became normal, with an occasional evening elevation to 100°–101° F., and she complained of nothing but the constant dribbling of urine. Her subsequent history was uneventful. She was allowed to get up at the end of the fourth week, at which time the wound still communicated with the vagina, and not quite so much urine dribbled away as at first. At the end of the fifth week the abdominal wound had entirely closed.

It is hardly necessary to add that the after-treatment of such a serious case in a dirty tenement-house required the constant personal supervision of a physician, and I take pleasure in acknowledging my indebtedness to Dr. Kletzsch, and especially to the attending physician, Dr. Hayes, for their assistance in this most thankless task. Without the exercise of constant vigilance the patient would certainly have succumbed to the operation or to the subsequent complications.

Before commenting on this case, it is important to classify it. As my friend Dr. Robert Harris, of Philadelphia, has clearly pointed out, it is neither a Porro nor a Cæsarean section proper, but is an operation *sui generis*. I was myself misled by a paper of Professor Lusk's in which he refers to the two successful cases of "Porro's

operation" for rupture of the uterus, reported by Slavjansky and Fontana. If it receives any name at all, it should be called "Prevôt's operation," since Prevôt, of Moscow, reported the first case (unsuccessful) in which the ruptured uterus was amputated after removal of the child through the rent, without previously incising the organ. The entire difference between this procedure and the Porro-Cæsarean operation lies in the fact that in the former hysterotomy is not performed. Through the courtesy of Dr. Harris, who has taken the greatest interest in my case, I am enabled to present a table prepared by him, which, so far as I have been able to determine by personal research, with the addition of two other cases, is complete up to date.

I at first supposed that mine was the only case in the United States, as I believe that it is the only successful one, but Dr. M. Price has kindly sent me the notes of a similar operation performed last April, which I will quote in order to emphasize the difference in treatment in the two instances. Dr. Harris informs me that there have been ten true Porro-Cæsarean sections for rupture of the uterus in this country, four women having been saved. The details of Dr. Price's case are briefly as follows: He was summoned by a midwife to see a woman who was in labor with her seventh child, and had lost so much blood that she was pulseless. On examination the child was found to be presenting transversely, the left foot and leg extending into the peritoneal cavity through a rent in the uterus. The doctor delivered the child after performing version, and sent for assistance. The abdomen was opened, the placenta was removed from the abdominal cavity, and the uterus was lifted out. The organ had "not only a long laceration in its left wall, but was considerably torn from its vaginal attachment, with no apparent contractile power left." The *serre-nœud* was applied, and the uterus was removed. The patient succumbed half an hour later.

The reporter explains that his reason for delaying the operation was the want of counsel and assistance, and the

fact that he could not communicate with the husband until an interpreter had been summoned. While appreciating the doctor's position, which was more difficult than my own, since I was able to operate without delay, I cannot help thinking that if he had waited for assistance *without performing version*, and then had operated as rapidly as he did (fifteen minutes) the result would have been different. My case was even more unfavorable than his, since the patient had been under an anæsthetic for three hours, during which time the soft parts suffered severe injury from hands and instruments. There was greater laceration of the uterus and surrounding tissues, and, moreover, more than two hours elapsed between the rupture and the operation. I am sure that a further attempt at version on my part would have terminated the case fatally in a few minutes. Since the child was dead in all the cases reported, there seems to be no reason why we should destroy the small chance which the mother has of being saved by laparotomy, by trying to perform version with the certain risk of increasing the tear in the uterus, and adding to the existing shock—that is, if we intend to perform laparotomy at all. If no operation is contemplated, the case is different, and does not belong to the present category.

In conclusion, I would say that, given the same conditions, I would adopt precisely the same method of procedure in another case of rupture of the uterus, because I believe that it would offer the best chance of saving the patient, for the following reasons:

1. The operation can be performed in the shortest possible time. Time is the most important element in these desperate cases.

2. It is impossible to properly suture such an extensive rent, with contused edges, as the one described, which begins at the cervix and extends through the broad ligament up into the body of the uterus. There is imminent risk of hemorrhage after removal of the temporary constriction.

Cases of Ruptured Uterus Treated by Supra-vaginal Amputation, as Initiated by Prevôt, of Moscow.

No.	Date.	Operator.	Locality.	Hospital or private house.	Age.	Number of pregnancy.	Time between operation and rupture.	Condition of woman at time of operation.	Result to woman.	Result to child.	Cause of death in woman.	Treatment of cervical stump.	Duration of operation.	References.
1..	Nov. 22, 1878...	Dr. Oscar Prevôt	Moscow	Hospital.....	33	Fifth	10 hours.....	Suffering from incipient peritonitis.	Died on fifth day..	Dead .	Frequent hemorrhages from pedicle.	Extra-peritoneal...	45 minutes..	American Journal of Obstetrics, October, 1880.
2..	Feb. 12, 1880 ...	Prof. Säxinger	Tübingen, Germany.	Hospital.....	20	First	6 hours.....	Exhausted ; tympanites uteri.	Died in 33⅓ hours.	Dead ..	Collapse ; gangrene of uterus and vagina.	Extra-peritoneal...	70 minutes..	British Medical Journal, January 26, 1884, p. 158.
3..	March 14, 1881..	Prof. Ercole Pasquali.....	Rome. Italy ...	Hospital.	38	Fourth ...	3 days' labor ; not given.	Favorable	Died in 24 hours ..	Dead ..	Septicæmia	Intra-peritoneal ...	1 hour... ..	Annali di ostetricia di Milano, 1881, p. 599.
4..	April 2, 1881	Dr. Federico Fornari	Ascoli Piceno, Italy.	Private house.	27	(?)	12 hours' labor; not given.	Very unfavorable..	Died in 51 hours ..	Dead ..	Peritonitis	Intra-peritoneal ...	1⅙ hour....	Raccoglitore Medico, Forli, xv., 1881.
5..	March 21, 1882..	Dr. Marchand	Paris	Hospital.....	26	Fourth ...	1½ hour	Very unfavorable..	Died day of operation.	Dead ..	Peritonitis	Extra-peritoneal...	45 minutes..	British Medical Journal, January 26, 1884, p. 158.
6..	Nov. 2, 1882	Dr. W. C. Grigg.....	London	Hospital.....	25	Third	22 hours.....	In a state of collapse.	Died in 15 hours ..	Dead ..	Exhaustion.....	Extra-peritoneal...	2¾ hours...	British Medical Journal, January 26, 1884, p. 158.
7[1].	Oct. 6, 1885....	Prof. K. Slavjansky.[1]	St. Petersburg..	Hospital.....	37	Ninth	.....	In collapse.....	Recovered	Dead ..	. .....	Extra-peritoneal...	45 minutes..	Nouvelles Archives d'Obstet. et de Gynécol., 2, 1887, p. 534.
8..	Nov. 5, 1886	Dr. Samuel R. Mason	Dublin	Hospital.....	..	Third	26 hours.....	Very unfavorable ; gas in abdomen.	Died in 10 hours ..	Dead ..	Peritonitis ; oblique pelvis of Naegele.	Extra-peritoneal...	.....	British Medical Journal, February 12, 1887, p. 337.
9..	.....	Drs. Butruille and A. Godefroy.	.....	....	..	.....	.....	.....	Died	Dead ..	... .	..... .	.....	Bulletin Med. du Nord, Lille, 1887, xxvi., pp. 267–270.
10..	Nov. 24, 1887 ...	Dr. Pier M. Fontana	Brescia, Italy...	Hospital.....	31	Fifth	24 hours ; rupture from injury.	Pulse 130, respiration 30 to 32.	Recovered	Dead ..	....	Extra-peritoneal...	1 hour.....	Annali di ostetricia, 1888, x., pp. 97–121.
11..	April 12, 1889...	Dr. Mordecai Price	Philadelphia	Private house.	39	Seventh ..	½ hour.....	In collapse	Died in 30 minutes.	Dead ..	Hemorrhage	Extra-peritoneal ..	15 minutes..	Cincinnati Lancet-Clinic, September 28, 1889, p. 336.
12..	Sept. 8, 1889....	Dr. Henry C. Coe..... ...	New York	Private house.	23	Second ...	2½ hours.....	In collapse.....	Recovered	Dead ..	.....	Extra-peritoneal...	1 hour.	
13..	.....	Dr. Wiedow[2].....	Fribourg	Hospital.....	..	.....	14 hours.....	.....	Recovered	Dead ..	....	Extra-peritoneal...	.....	Annales de Gynécologie, September, 1889, p. 216.
14..	.....	Dr. Kehrer	Heidelberg	Hospital... ..	..	.....	.....	.. ..	Recovered	Dead ..	.....	Extra-peritoneal...	.....	Ibid.

[1] In this case the accident occurred in the ninth month of pregnancy, the patient being knocked down by a street-car. She was brought to the hospital in collapse. The case was in other respects parallel with the one reported.
[2] The case was reported at the German Gynecological Society last June, at which time Kehrer's patient was shown.

3. Where the prolonged use of instruments, without strict antiseptic precautions, has occurred, the interior of the uterus is sure to be badly contused, so that the subsequent danger of sepsis is great. I would rather run the risk of the additional shock to the patient from removing the lacerated uterus than expose her to the certain risk of septicæmia by leaving it.

4. Though the objection made by Dr. Harris, that "a cervix split by laceration cannot be very well fitted for constriction, as the part below the wire may discharge septic matter into the abdominal cavity through the rent," is a good one, nevertheless, if the tear in the peritoneum is carefully closed, and the stump is properly constricted and shut off from the peritoneal cavity, I believe that there is less danger than there is when we trust to the suture alone, without constriction. Finally, with all respect for the opinion of such a weighty authority as Dr. Harris, who believes that it "would hardly be admissible" to subject a woman with a normal pelvis to "the unsexing operation of removing the lacerated uterus with the ovaries, as was done by Prévôt," it should be borne in mind that the laparotomist is sometimes called upon to do, and to do at once, what he believes is the best thing for the patient, without regard to established precedent or even to the ordinary rules of surgery. In the presence of a dreadful emergency we cannot reason as calmly and philosophically as we would in the library.